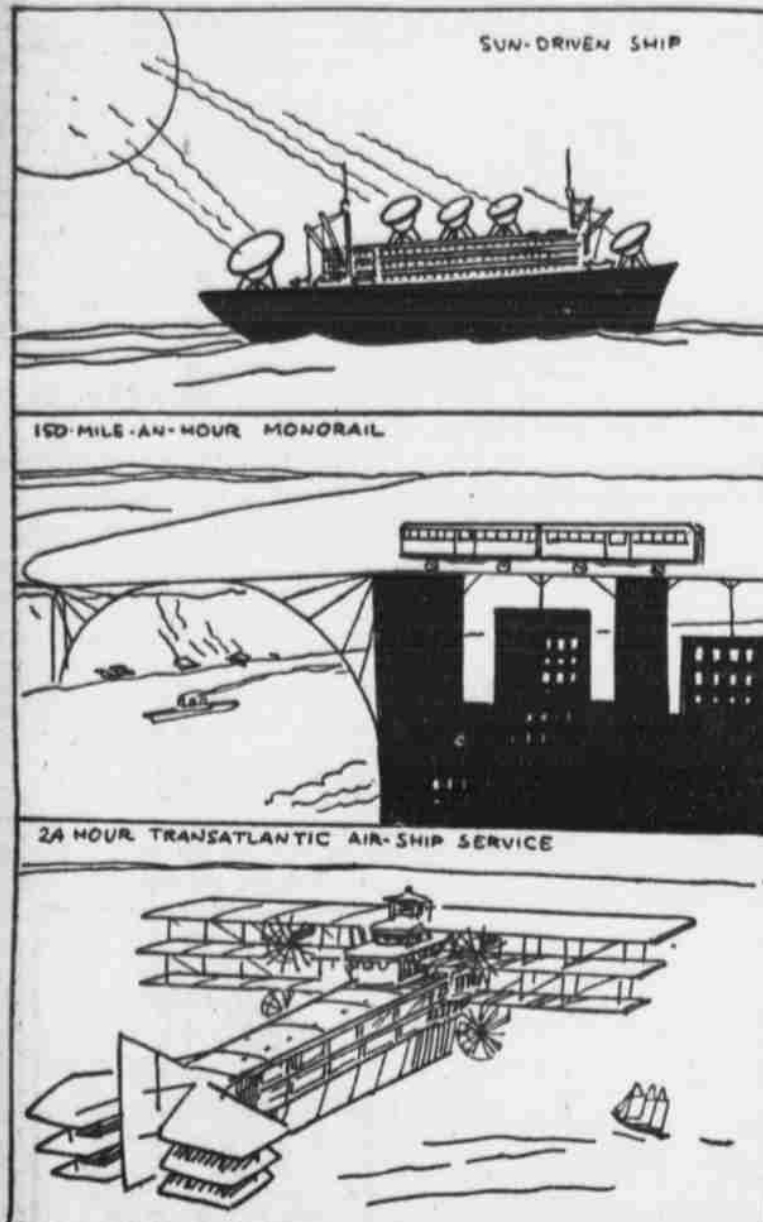


WEDNESDAY, MAY 7, 1919

These Inventions Will Speed Travel and Lower Its Cost



The Evening World Daily Magazine

Whole World's Inventive Genius Centres on Twelve Big Problems

- 1—Sun Driven Ships
- 2—150-Mile-an-Hour Monorails
- 3—24-Hour Transatlantic Airships
- 4—A Substitute for the Egg
- 5—Automatic Bricklaying Machines
- 6—Refrigerating Plant for Householders

- 7—Paper Suits at \$1.50 Each
- 8—Voice-Driven Typewriters
- 9—Inkless Printing Presses
- 10—Cooking by Chemical Recipes
- 11—World Power Plant in the Sahara
- 12—Wasteless Power Transportation

An Interview With **WALDEMAR KAEMPFERT**, Editor of Popular Science Monthly

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ONE forever is the God-gifted genius who invented one aid to human progress and quit; come are the calculating, tedious inventors to whom research is a life profession; coming are marvels yet unthought of that shall give to humanity wider and keener enjoyment of all life.

Sun-driven ships. One-rail roads. Household cooking by chemical recipes.

Paper suits at \$1.50 a suit, to be burned when worn once.

The Sahara desert as the power producing area for at least half the world.

Inkless printing presses. These are some of the marvels the world will see—the result of stern day after day application to the sciences.

Waldemar Kaempfert, editor of Popular Science Monthly, so predicts.

He sees with far-seeing eyes; he is impatient at the waste of to-day, the waste of human energy, the waste of materials, the waste in the production of all things mankind needs and uses daily. Houses are ill-furnished, cooking is dependent upon a "pinch of this and a pinch of that" and the chef's own digestion, railroads have scorned invention and remained practically inert so far as real progress is concerned, these are some of the complaints of this youngish man who sits and dreams of what man's brain may conceive and his hands tool out.

Progress in five great classes of human needs is demanded of the inventor:

- In food.
- In shelter.
- In transportation.
- In labor saving machinery.
- In power generation.

"No one has ever perceived a substitute for an egg," he told an Evening World reporter. "Efforts have been made but so far there have been assembled in the laboratories no substitute for proteins and albumens. The Germans, however, during the war, prepared wood pulp, ran it through a protein solution and gave it to its people to eat. In all probability it was good for them. We do not eat enough roughage; we need brooms to sweep our insides clean."

"This is the tin can epoch of American cookery. And it points to betterment in foods. The great canning factories, food-producing plants of the United States, know the value of chemical research in the preparation of foodstuffs. They are sending into the homes of America every day recipes written and based upon actual chemical research. The American housewife is learning to use them. It is well that she does. She will learn much, for food preparation is essentially a problem in chemistry."

"Why should not your mayonnaise taste exactly the same ten years from now as it does to-day? It should if that recipe was founded upon chemical facts and not permitted to depend upon the artistic whims of the chef. Every hotel should have a chemist to do its cooking. I eat an Irish stew to-day; it is splendid. I order the same dish a week from now and it is unpalatable. Lack of chemical foundations. 'Ice, one of the greatest necessities of present-day life—waste, waste, waste. Great buildings must be erected to store it; transportation must be provided; it is placed in your dumbwaiter and there melts, dripping waste, waste, waste. Some one must produce a refrigerating plant that will be available to every householder."

"The modern home is silly. Architects seem to think that the home is merely a place of shelter from the rain. Not so; it is the workshop of a man as well as his shelter. Two-thirds of the average man's life is spent in his home; yet they continue to be fashioned in a way that permits not half of the home's potential facilities to be at the home owner's disposal. That is not strictly a problem for the inventor; but the building of the home is, bricklaying, for instance—a machine should lay the bricks, a level moved, a row of bricks laid. That will come."

"Railroad transportation is at a standstill. Do you know that Stevenson got 60 miles an hour out of his locomotive in 1825 and that not since 1854 has there been any marked increase in railway speeds? True. The railroad companies conduct no speed research. They do nothing to discover ways of reducing head-on resistance. As for new inventions, they ignore them. The monorail railroad will increase speed up to 125 and 150 miles an hour. Not a single company has undertaken to put it into practice. Yet it is the result of a skilled engineer's earnest study and is not a dream but a reality."

"The 'hop' across the Atlantic of these alien in airplanes is of interest; but those machines are not the machines that you and I will travel to London in 24 hours in."

Most likely those will be of a dirigible type, because comfort, sleeping apartments, promenades are necessary to make the flight of practical service. The airplane, to become the machine of immediate commercial value, must be able to rise directly from its position on the ground. The helicopter is a step toward that, but it is not perfect; in fact, outside of the toys with which children play in the streets the lifting screw has failed. But we need something which will lift in a straight-up from a roof.

"Invention is a problem of economics. As people need, so inventions are accomplished. Germany had a great labor supply; she had practically no raw materials; so German inventors centered themselves upon discoveries that would save waste in raw materials. America, on the contrary, is prodigal in material, but lacks labor; so America has led all nations in labor-saving machinery. The great factories of this country are now employing inventors and research men by the year."

"The typewriter is crude. That girl there wastes muscular energy in every letter she writes. Power should drive that typewriter. The electrical typewriter has engaged the attention of inventors; but it is not yet commercially practical; but that is not the end; a voice-driven machine is a possibility; but in our English language with its confusing spelling, such as 'tough' and 'stuff,' it is a difficult one to overcome. Phonetic symbols must be resorted to."

"And also there is the need of power and more power. Coal is already a problem. The supply of anthracite will not last more than a hundred years; in five hundred years there will probably be no coal in America. It is possible that the atmosphere is a great pool of electricity; we must tap it. The sun pours down on each acre 5,000 horse power. That power is now a waste. It must be utilized; we must capture and husband it. Sun-driven ships are not too fanciful to be thought of. The Sahara desert might become the power plant of southern Europe, whose coal is scarce and sunshine plentiful."

"Power must be transported in a less wasteful manner. Tesla has already experimented. He has succeeded in lighting lamps without wires—by wireless transmitted energy. How far can that be developed? There is no limit."

"Inkless printing presses are to

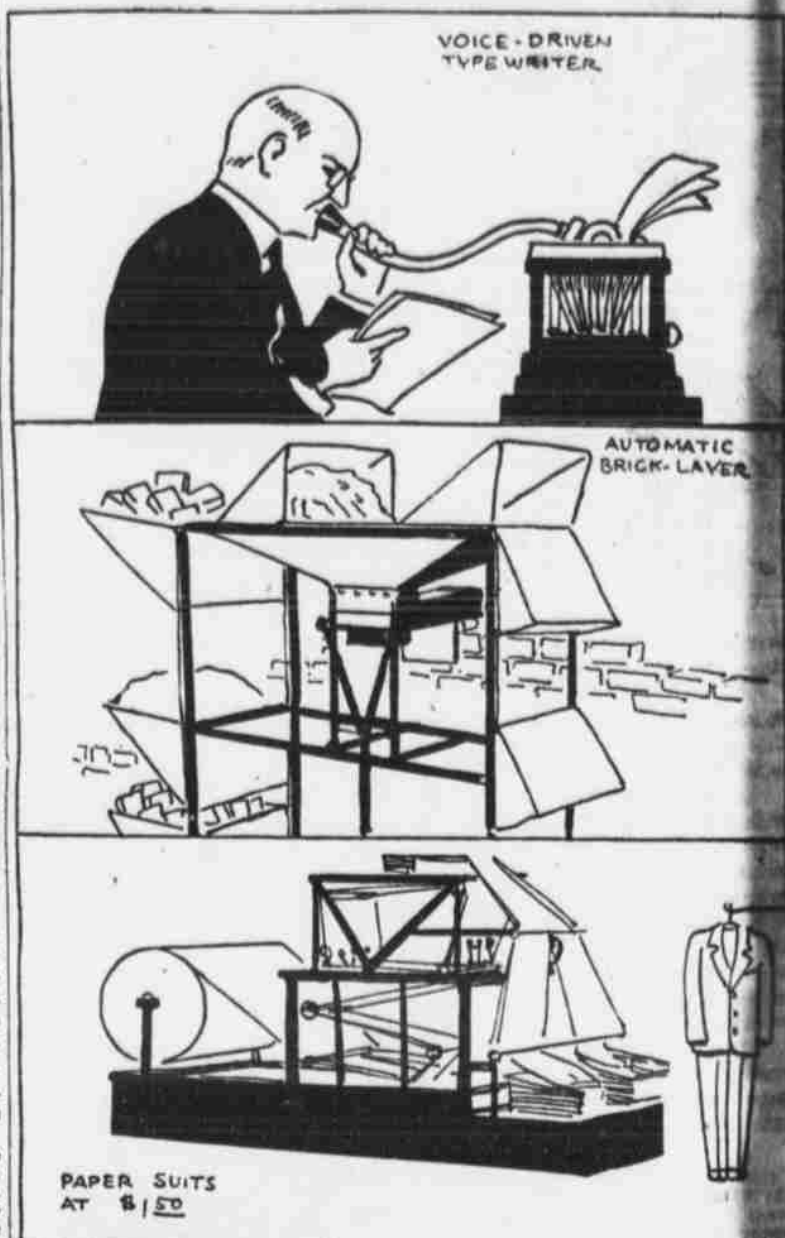
come. There is no need of there being any ink on the rollers of the press; it is messy, it is expensive. Paper will be impregnated with a chemical solution. As the type touches the paper chemical reactions will take place. The characters will appear without ink. Something like that is done now. It is transmitting photographs by wire. The pen traces the picture on the sensitized paper; a directed current produces the desired chemical changes.

"There is no limit to invention; but to procure all of the wonderful benefits of the future, the government should do the work. A man should be able to present his problem to the government and have the government solve it for him. Spend two or three millions of dollars on a single problem; wonderful results will come."

"The one God-given idea that made the genius of yesterday is gone; it is the practical test man, the man of the laboratory and shops who spends his life at it, who makes the discoveries that better the living condition of the world."

WEDNESDAY, MAY 7, 1919

Genius Will Solve These Problems in Near Future



How to Live--and How to Live Long

Health Rules Compiled by Life Extension Experts.

NO. 2—OUT OF DOORS AND WINDOWS.

By Zoe Beckley

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HOW shall we live the outdoor life in town? THAT, as Mr. Hamlet might have said, is the question. It can't be done, say you, being a sceptic. It can too, retorts the Life Extension Institute, devoting many pages of its book "How to Live" to the problem of ventilating not only our houses and our clothes, but our lungs and our everyday lives.

Indoor air, says the book—and any demobilized soldier just replanted from the trenches to the cement-walled cliff he calls home will corroborate it—is never as good as the honest air of outdoors. True, we cannot all own an Alp or an Adirondack. But we can get more of the free air of heaven ("free" being used in the poetic, not the landlording sense) than we do.

First of all, the Life Extensionists urge, rid yourself of the prejudice against damp air. Like "night air," its disadvantages are exaggerated. While moderate dryness of atmosphere is an advantage, it is better to brave the dampest, foggiest, out-of-doors air than to live mewed up in the house.

It is no longer a theory that open air life leads to longevity, and that kiddies in outdoor and open-window schools are not only more healthy but learn more quickly than walled pupils. For grown-ups there are the obvious excursions to parks and beaches, the summer trolley trips, the week-ends at country inns, and the two weeks or more vacation at mountains or seashore. But better than that and less obvious are the excursions the victim of city life can take into the out-of-doors to sleep.

I remember visiting a working girl friend of mine who lives in one of those "model tenements" at East River and Seventy-Something Street. About dusk I noticed various long, French windows opening and bed-heads emerging onto wide balconies that adorn several floors. Shrouded forms were on these beds, which I noticed soon lay in the relaxed motionlessness of perfect sleep.

"The fresh-air brigade," explained my friend. "They come out this time every night. In rainy weather they 'rig up little tents, or cover themselves with ponchos. It's great. I'm going to get a window tent myself, no matter how the neighbors stare. Sleeping 'out,' she added, "is a lot easier than people imagine."

The Life Extension Institute heartily backs her up. "In fact," it insists encouragingly, "few if any of the other cardinal rules of hygiene are so easy to obey. Where a sleeping porch is not available, a window tent can always be had, which puts the sleeper practically out of doors. Complete directions for convenient out-of-door sleeping will be furnished upon application to the Life Extension Institute, No. 25 West 46th Street, New York."

Even the sleeping porch could be more prevalent than it is. From the window of my apartment I can count five of these in a single block, in back yards and on roofs. Two more are being built by simple carpentering. I wonder that every one who boasts a back yard or a private roof does not indulge in this life-giving luxury, which "increases the power to resist disease and greatly pro-

Plain ordinary breathing—the unconscious kind—will not do. You must breathe DEEP.

"A Russian author suffering a nervous breakdown," (no one wonders at that, in these days of dictatorship for the proletariat, do they?) "tried every other aid without success," says the book. "He then retired for several months to the mountains, practicing simple, deep-breathing exercises systematically every day, and was permanently cured in a few months."

"Deep breathing is a prime resource to all who are shut indoors most of the day. If they will seize the chance whenever it offers to step into the street, or upon the roof, or even lean from a window and take a dozen deep breaths, it will work wonders."

"In ordinary breathing only about 10 per cent. of the lung contents is changed at each breath. In deep breathing a much larger percentage is changed, the whole lung is forced into action and the circulation of the blood in the abdomen is more efficiently maintained, equalizing the circulation throughout the entire body."

"The mode of breathing is closely related to the mental condition; either influences the other. Agitation makes us catch our breath. Sadness makes us sigh. Conversely, slow, even breathing calms mental agitation and stabilizes the entire organism."

In America's Wonderlands.

THE narrowest width of the Rocky Mountains, from base to base, is about three hundred miles.

Lake Superior, the greatest body of fresh water in the world, is so large that the whole of Scotland could easily be sunk in its translucent depths.

The Yellowstone National Park, the crowning wonder of America's wonderlands, lies within its area of 3,212 square miles, several high mountain ranges, three large rivers with their tributaries, thirty-six lakes and twenty-five waterfalls.

The Rock of Gibraltar towers to a height of 1,200 feet; its massive counterpart in the Yosemite National Park, El Capitan, is three times as high.

The Grand Canyon of the Colorado River in Northern Arizona is 219 miles long, twelve to thirteen miles wide and more than a mile deep.

ANSWER TO GOING BY ELEPHANT PUZZLE.

The traveller must have been 24 miles from Calcutta; and if it was then noon, he would arrive at 4 o'clock. If his camel walked at the rate of six miles an hour and the boat would have left at 3 o'clock. If he trotted at the rate of 12 miles an hour he would arrive at 2 o'clock and have an hour to spare before the boat left.

The Story of New York Squares

Gramercy Park, Once a Crooked Little Swamp, Now City's Most Unique Inclosure.

By Eleanor Clapp.

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GRAMERCY PARK is in many ways the most unique square in New York, for it has in the centre a private inclosure that belongs to the owners of the houses immediately surrounding it and that is maintained by them for their exclusive use.

Because this square was laid out in imitation of Russell Square in London we are apt to think that the name it bears is of English origin. Gramercy has a fine old Elizabethan sound that smacks of aristocracy. But sounds, especially word sounds, are even more deceptive than appearances, and Gramercy is simply a corruption of the old Dutch word "Kromme" or "Kromme" in the old records it is spelled both ways—a crooked little swamp and others a cobbler's curved knife. This name was given by the early settlers to a little stream that rose in this neighborhood and flowed southeast until it entered the East River at 18th Street.

Now in 1761 or thereabouts James Duane, a rich young man of the day,

who had not long before married the daughter of Robert Livingston of Livingston Manor, bought from Gerardus Stuyvesant, a descendant of the famous Dutch governor of that name, four acres of land lying between Broadway, Fourth Avenue, 19th and 20th Streets, where he built a fine house which he called "Gramercy Seat." A little later he added to the estate ten more acres which took in the "crooked little swamp" after which his home was named. This was the same Duane who was Mayor of New York and after whom Duane Street was named.

After Mr. Duane's death in 1797 his estate was divided among his five children in even slices, running from what is now the eastern boundary of Broadway to Third Avenue, and this land remained in the family for more than thirty-five years until Samuel Buel Ruggles, a prominent lawyer and financier, began to speculate in real estate. He realized that when lots were cut through this property in accordance with the City Plan of 1807 the shares of the different heirs would be in such small plots that they would be worth very little

and the only way to get full value for it was to keep the whole estate together, so he accordingly bought all of it.

In the hope of persuading people of means and social position to live as far uptown as Twentieth Street, Mr. Ruggles, as a special inducement, set aside forty-two lots "for the purpose of an ornamental square or park" which he presented to the owners of the sixty surrounding lots. According to the deed they were to place an iron railing around the plot with ornamental gates, to lay out the grounds and plant trees. The tenants thus benefited were to have keys to the gate and access at all times on payment of \$10 a year, which was to be used for the upkeep of the park. This little park is still maintained by the surrounding property owners. Pass by the inclosure in the centre of any pleasant day in spring and you will see the keyholders—or more often their children—enjoying the grass and the flowers and the few trees that have survived, just as they did in Samuel Ruggles's day.

Among the well known men who have lived in the square are Horace Greeley, Stuyvesant Fish, James W. Pinchot, John Bigelow, James W. Gerard, Robert Minturn, Albert Gallatin, H. C. Oakley and James Scripps, who laid the cable to South America. The old Roosevelt house where Theodore Roosevelt was born was nearby in 20th Street. At Nos. 14 and 15 was the handsome residence of Gov. Samuel Tilden, who was nominated for the Presidency in 1876 and received more votes than did his opponent, but lost the election because the votes of some of the States were disputed and the Electoral Commission, having a majority of Republican members, gave the disputed votes to Hayes. Gov. Tilden had at one time as much trouble with the little stream from which the square is named as he ever did with his political foes.

This brook had of course been filled in when the place was laid out and had long ago disappeared from view, but one wet spring it forced itself upon the attention of the dwellers on the south side of the park by suddenly rising and soaking its way into their cellars and setting everything afloat. Tilden is said to have spent over \$50,000 in vain attempts to keep out the water and his neighbors wasted almost as much. It was not until a new sewer was built to drain the swamp that the servants in these houses could put coal on the furnace without wading. The Tilden house is now the National Arts Club. Right next to it is the famous Players Club founded by Edwin Booth, who made his home here until his death in 1893. Young Mr. Duane, when he bought the land hereabouts for his home, paid about \$200 an acre for it, which was considered high in those days, but now the property included within the confines of his estate, Gramercy Seat, is assessed at nearly \$17,000,000.



Dere Bill



MABLE'S LOVE LETTERS TO HER ROOKIE

By Florence Elizabeth Summers

Illustrations by Natalie Stokes.



DERE BILL: I know it's been a week since I wrote but I've been knittin me a rainbow sweater. All the girls up on the avenue are makin em an their awful loud. Theres are. Mines made out of the scraps from your



things the with just a little touch of red and yellow your mother gave me. Most of em look like that coat you read about that Moses had on in the bull rushes. I made mine in three days but its too hot to wear

it. The avenue girls wear theres just the same. Their pride keeps them cool I reckon, but you know me, Bill, I aint proud. I never would a promised to marry you if I had a been, but I never care what people say long as I know a good thing when I see it. An not many fellas have your looks or money either, or are as close about keepin it. Thats a unusual trait I love in you Bill. Your perservative.

Im doin all the cookin. Aunt Mira died and ma went to the funeral. Looks like ma gets to go everywhere. They dont know what was the matter with her, just took a dose of Dr. Lufords medicine an died. Dr. Lufords the best doctor in town now. If you ever get sick Ill send for him. Kill or cure—thats his motto.

Cookins hard now cause pa's diet calls for soup an they wont let us have it now cause Nellies sick next door an they want everything kept quiet. Pa eats soup awful loud. At dinner I was that wore out that I set down on the woodbox an cried. A tack didnt give me much time to meditate though. Blessed is he that set on a tack, I reckon, for he shall rise again.

Margie Sams thinks shes so smart just because she took a year of High School. She was askin me the other day why I didnt learn to pronounce the Kaisers name an I told her it would take anybody with a powerful head cold to sneeze them names out an besides when YOU got over there



"I'VE BEEN KNITTIN ME A RAINBOW SWEATER."

his name would be mud an anybody could pronounce that. Thats right too eh Bill?

Must close on this line. As ever MABLE

(Copyright, 1919, by Frederick A. Stokes Company.) The complete series of "Dere Bill's" letters is published in book form.